

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/021534 A1

(51) International Patent Classification⁷: **H01S 5/0625**

(21) International Application Number:
PCT/IE2003/000116

(22) International Filing Date: 29 August 2003 (29.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
S020709 2 September 2002 (02.09.2002) IE

(71) Applicant (for all designated States except US): **INTUNE TECHNOLOGIES LIMITED** [IE/IE]; 9c Beckett Way, Park West Business Park, Dublin 12 (IE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FARRELL, Tom** [IE/IE]; c/o 9C Beckett Way, Park West Business Park, Dublin 12 (IE). **RYAN, Neil** [IE/IE]; c/o 9C Beckett Way,

Park West Business Park, Dublin 12 (IE). **LEVINS, John** [IE/IE]; c/o 9C Beckett Way, Park West Business Park, Dublin 12 (IE).

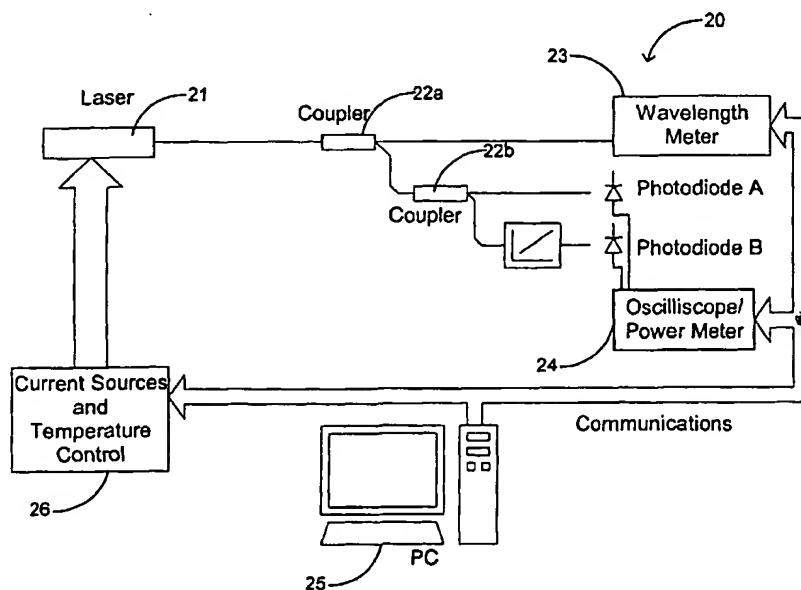
(74) Agents: **LANE, Cathal, Michael et al.**; Tomkins & Co., 5 Darmouth Road, Dublin 6 (IE).

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: COMPENSATION OF MODE JUMPS IN MULTI SECTION LASERS



(57) Abstract: The invention provides a method and system for compensating variations in tuning efficiency and power of a multi-section tunable laser diode. The invention comprises a means to obtain a set of values for a specific section of the laser diode and a means to normalise the values to compensate the non-linearities in the set of values, hence compensating for variations in the tuning efficiency for that particular section of the laser diode. The invention is advantageous in that it is generic and can be applied to several different types of lasers. A further advantage of the invention is that the mode width can be determined as well as the mode modulation of the tunable laser.